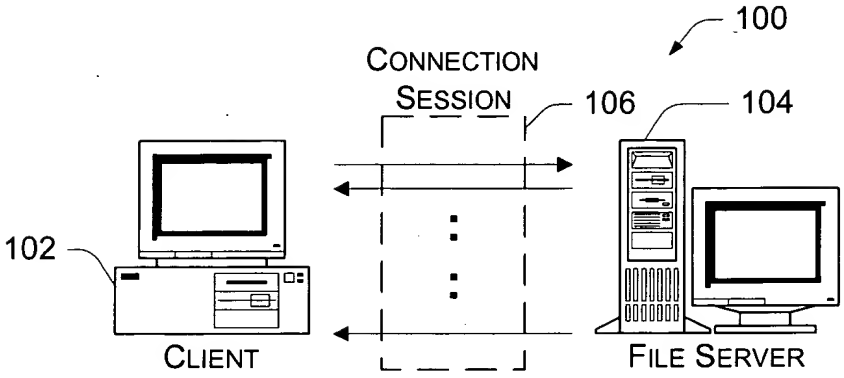
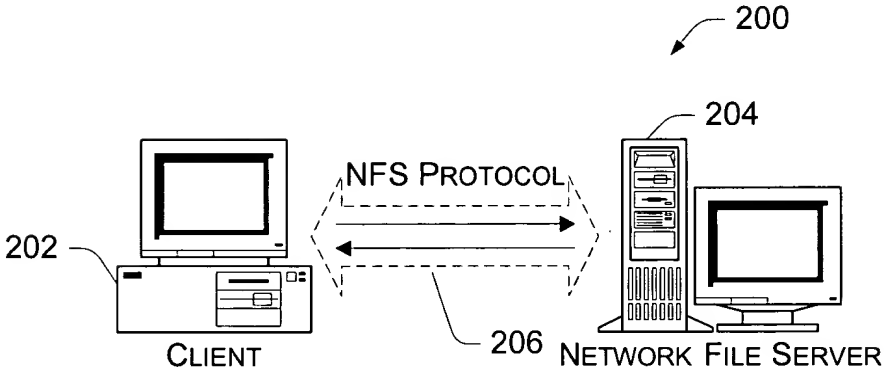


STATEFUL
ARCHITECTURE

Fig. 1

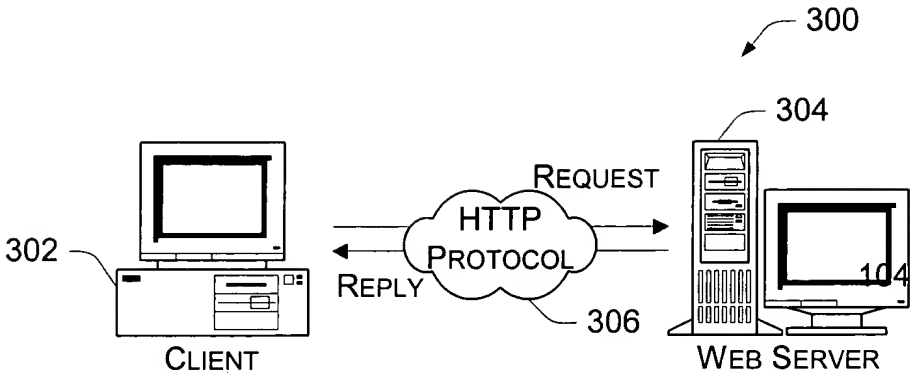
Prior Art



STATELESS
ARCHITECTURE

Fig. 2

Prior Art



INTERNET
ARCHITECTURE

Fig. 3
Prior Art

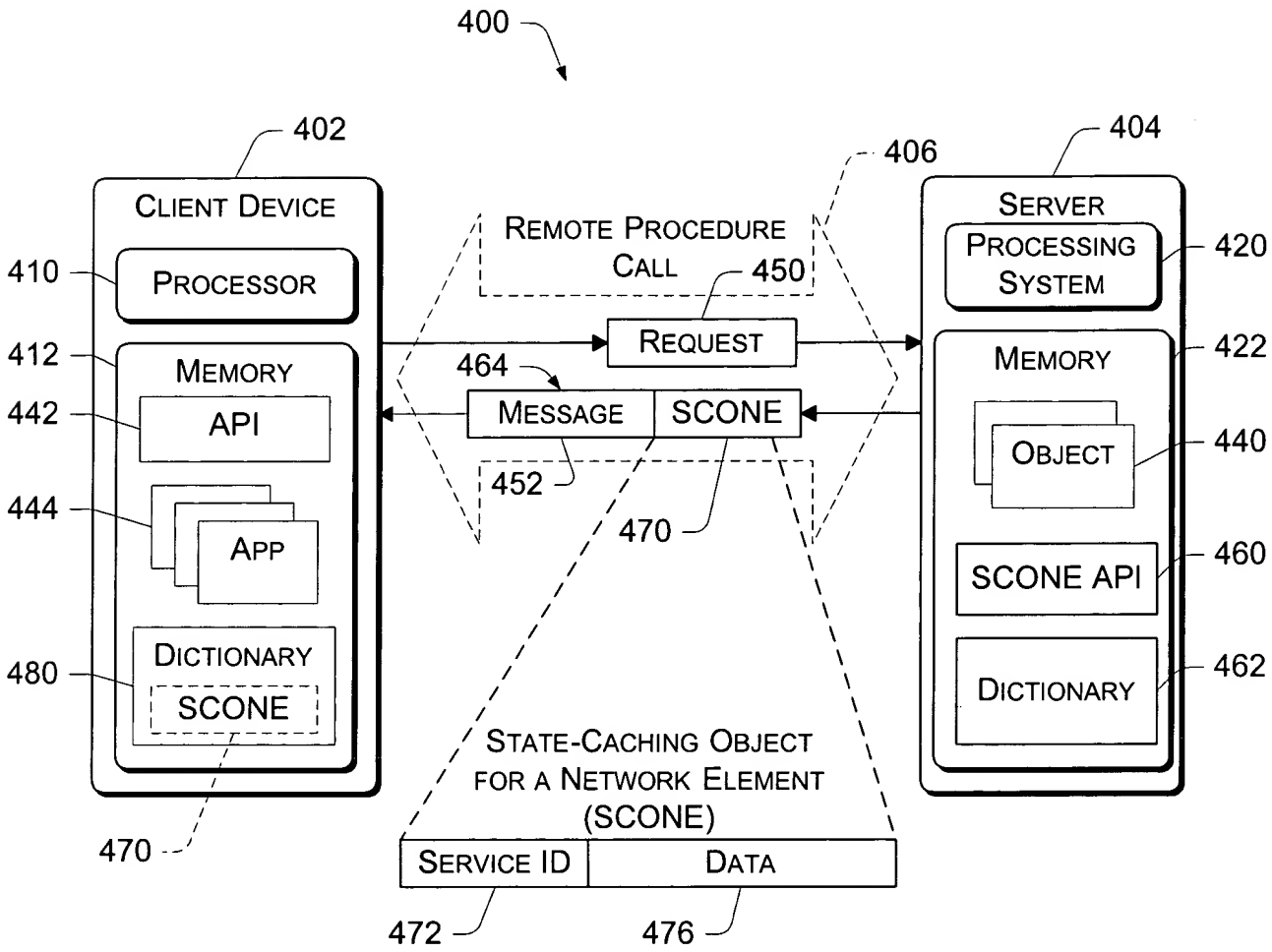

400
402
CLIENT DEVICE
410
PROCESSOR
412
MEMORY
442
API
444
APP
480
DICTIONARY
SCONE
470
406
REMOTE PROCEDURE CALL
450
REQUEST
464
MESSAGE
SCONE
452
470
404
SERVER
PROCESSING SYSTEM
420
MEMORY
422
OBJECT
440
SCONE API
460
DICTIONARY
462
STATE-CACHING OBJECT FOR A NETWORK ELEMENT (SCONE)
SERVICE ID
DATA
472
476

Fig. 4

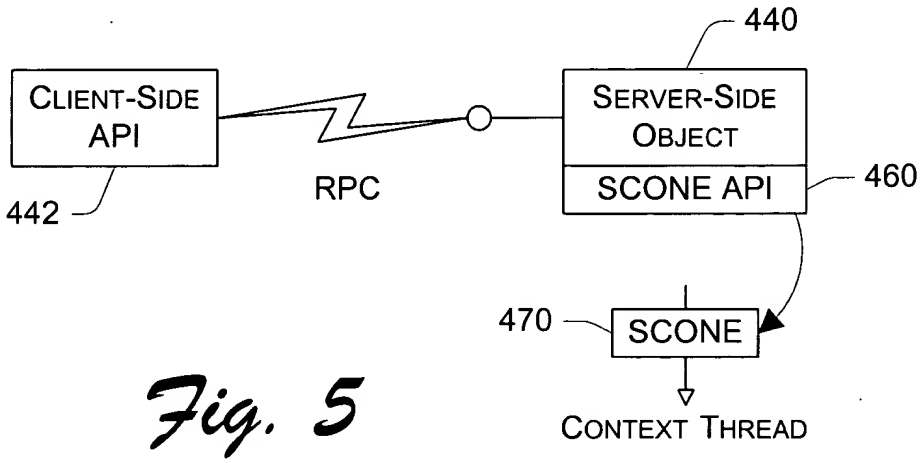

440
CLIENT-SIDE API
442
RPC
SERVER-SIDE OBJECT
SCONE API
460
470
SCONE
CONTEXT THREAD

Fig. 5

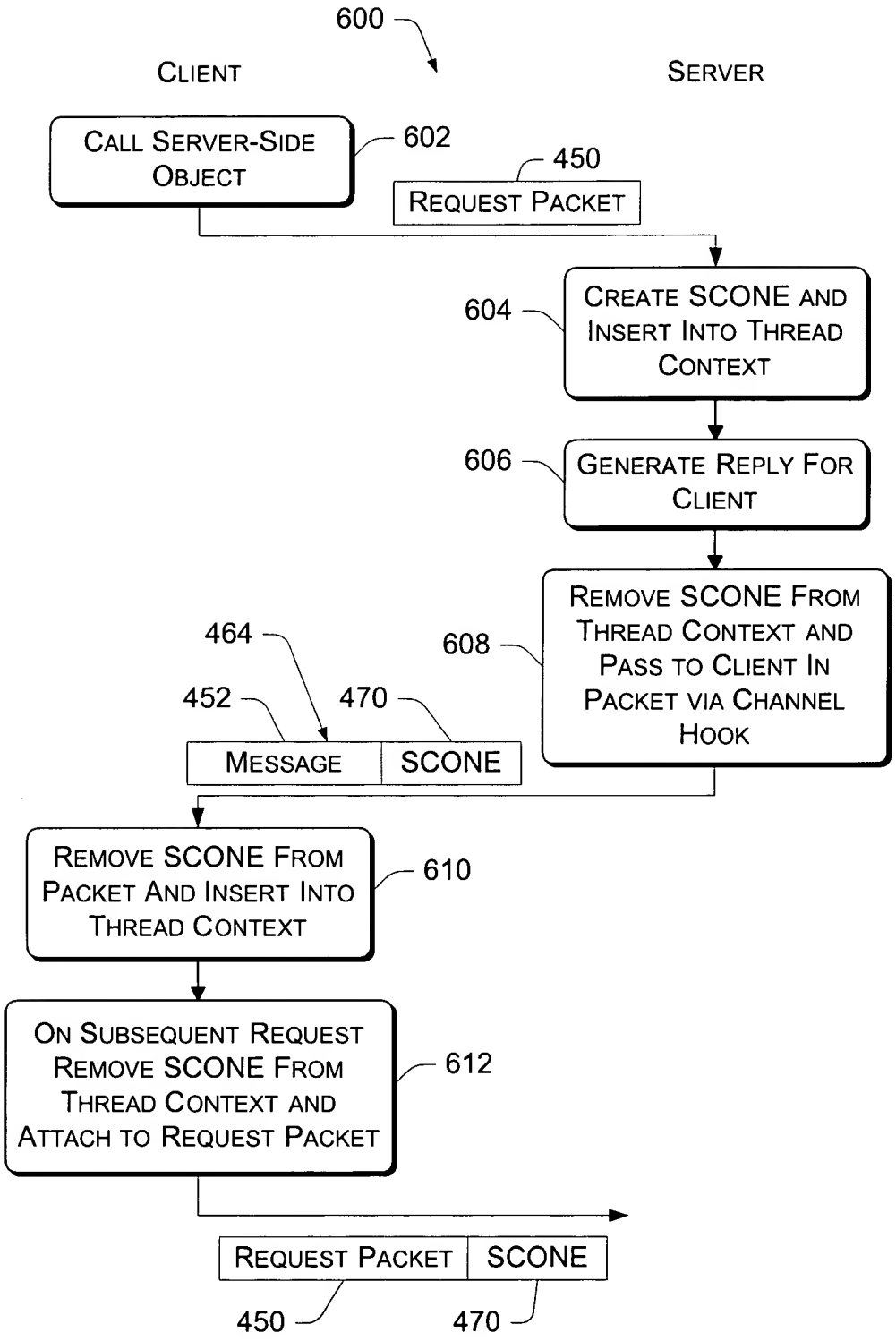

600
CLIENT
SERVER
CALL SERVER-SIDE OBJECT
602
450
REQUEST PACKET
604
CREATE SCONE AND INSERT INTO THREAD CONTEXT
606
GENERATE REPLY FOR CLIENT
608
REMOVE SCONE FROM THREAD CONTEXT AND PASS TO CLIENT IN PACKET VIA CHANNEL HOOK
464
452
470
MESSAGE
SCONE
REMOVE SCONE FROM PACKET AND INSERT INTO THREAD CONTEXT
610
ON SUBSEQUENT REQUEST REMOVE SCONE FROM THREAD CONTEXT AND ATTACH TO REQUEST PACKET
612
REQUEST PACKET
SCONE
450
470

Fig. 6

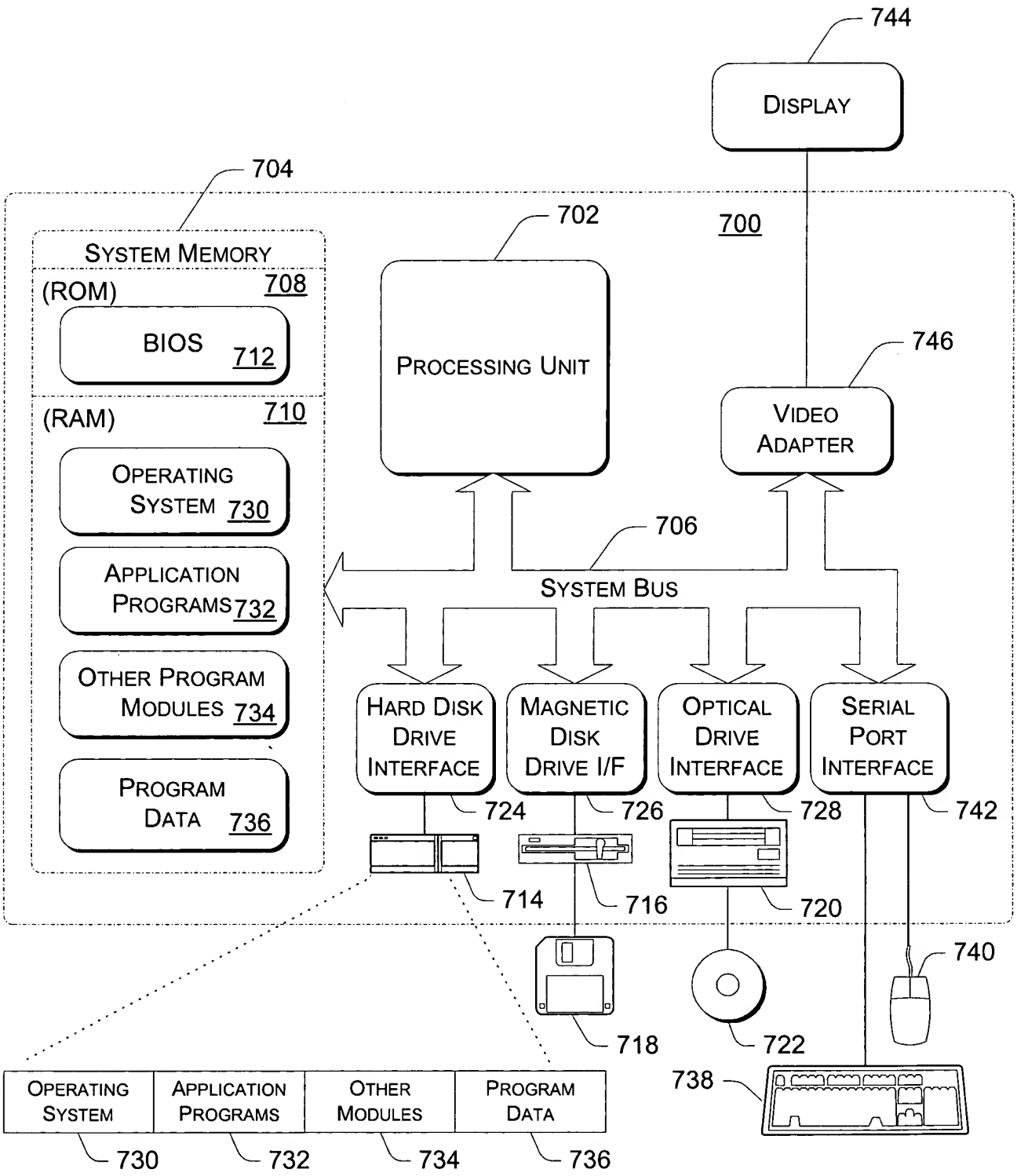

744
DISPLAY
704
700
SYSTEM MEMORY
(ROM) 708
BIOS 712
(RAM) 710
OPERATING SYSTEM 730
APPLICATION PROGRAMS 732
OTHER PROGRAM MODULES 734
PROGRAM DATA 736
702
PROCESSING UNIT
746
VIDEO ADAPTER
706
SYSTEM BUS
HARD DISK DRIVE INTERFACE
MAGNETIC DISK DRIVE I/F
OPTICAL DRIVE INTERFACE
SERIAL PORT INTERFACE
724
726
728
742
714
716
720
740
718
722
738
OPERATING SYSTEM
APPLICATION PROGRAMS
OTHER MODULES
PROGRAM DATA
730
732
734
736

Fig. 7

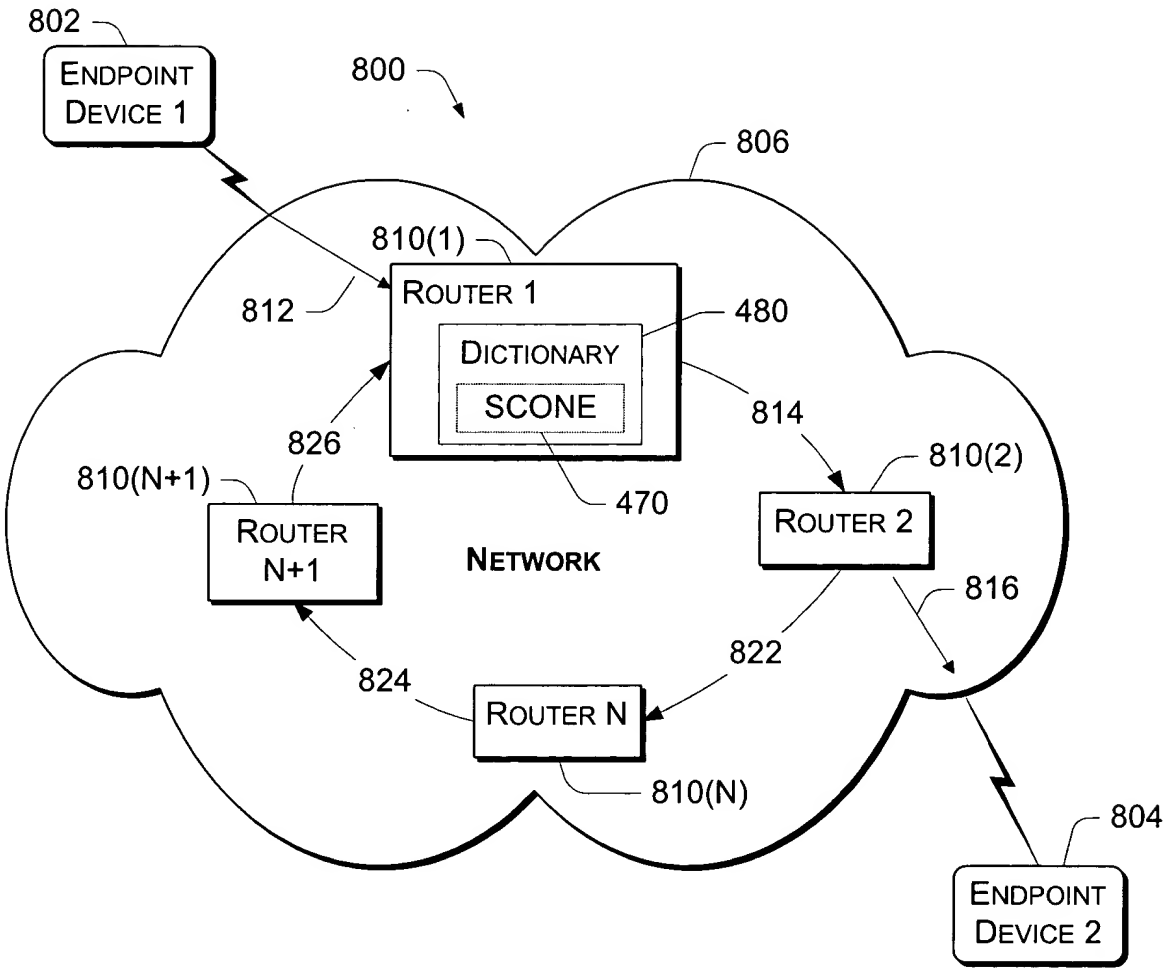

802
ENDPOINT DEVICE 1
800
806
810(1)
ROUTER 1
812
480
DICTIONARY
SCONE
814
826
810(N+1)
ROUTER N+1
470
NETWORK
ROUTER 2
810(2)
816
822
824
ROUTER N
810(N)
804
ENDPOINT DEVICE 2

Fig. 8

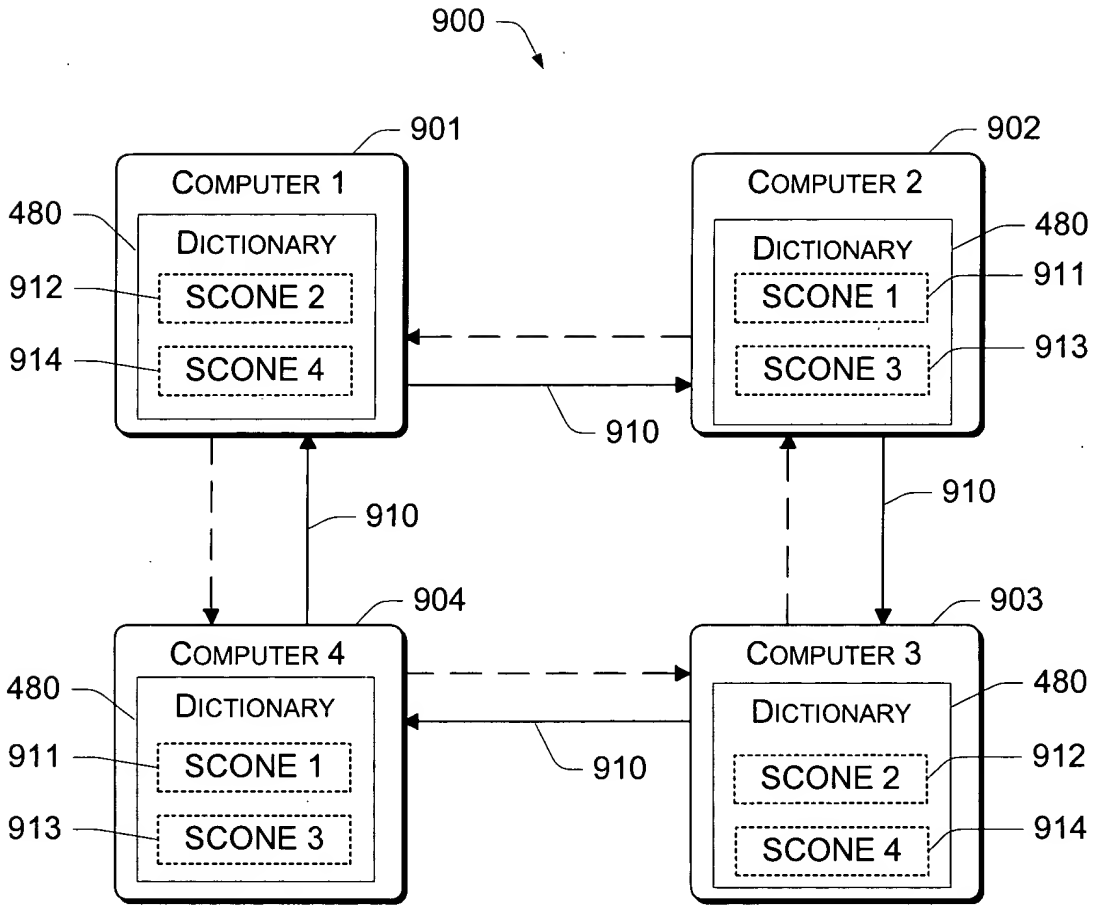

900
901
COMPUTER 1
480
DICTIONARY
912
SCONE 2
914
SCONE 4
902
COMPUTER 2
480
DICTIONARY
911
SCONE 1
913
SCONE 3
910
910
910
904
COMPUTER 4
480
DICTIONARY
911
SCONE 1
913
SCONE 3
903
COMPUTER 3
480
DICTIONARY
912
SCONE 2
914
SCONE 4
910

Fig. 9